

DISCUSSION OF THE CLAIMS

Claims 1, 3-12, 14-22, 24-28, 30-38, 40, 46-51 and 53-59 are active in the present application. The claims are not amended in the present paper. No new matter is added.

REMARKS

Applicants thank the Office for withdrawing the rejections under 35 U.S.C. § 112 set forth in the November 23, 2009 Office Action.

Applicants thank Examiner Cole for the helpful and courteous discussion of May 25, 2010. During the discussion, Applicants' U.S. representative pointed out that the Bishop patent (U.S. 5,639,555) does not explicitly disclose that glycidoxo and acryloxy group-containing coupling agents are generically equivalent.

Present Claim 53 is drawn to a membrane having a coating that consists of a homogeneous mixture of an adhesion promoter-containing composition and one or more inorganic oxides. The adhesion promoter-containing composition is a reaction product of a mixture that consists of water, hydrochloric acid, ethanol, tetraethoxy silane, methyltrimethoxy silane and at least one of a glycidyloxy-functionalized silane and a methacryloyloxy-functionalized silane. Applicants pointed out in the Amendment filed on January 21, 2010 that the adhesion promoter-containing composition of present Claim 53 necessarily excludes the silane coupling agent-containing compositions of the Bishop patent.

The Office responded to Applicants' arguments by stating that the Bishop reference is relied on for the purpose of demonstrating that glycidoxo and acryloxy group-containing silane coupling agents are equivalent to the silane coupling agents taught in the Penth patent (U.S. 6,309,545) (see pages 14 and 15 of the April 16 Office Action).

Applicants point out that Bishop does not disclose that glycidoxo or acryloxy group-containing silane coupling agents are generically equivalent to the silane coupling agents of Penth. At best Bishop discloses that glycidoxo and acryloxy group-containing silane coupling agents may be used interchangeably in certain tris(silylorgano)amine-containing compositions (see column 1, lines 65-66 of Bishop).

There is no disclosure or suggestion in the Bishop reference that a glycidoxy and/or acryloxy group-containing silane coupling agent is generically equivalent to any other type of silane coupling agent in the absence of a tris(silylorgano)amine. Bishop describes generic silane coupling agent compositions as follows:

Silane compositions and silane coupling agents are well known. The use of silane coupling agents can increase the adhesive characteristics of many bonds, particularly the bond of thermosetting resins to glass, metal and metal oxide surfaces. It is well known that the bond formed by silane coupling agents is often deleteriously affected by moisture and, occasionally, the exposure of silane-coupled bonds to humid conditions can lead to the premature failure of the bond.

See column 1, lines 22-25 of Bishop.

Bishop distinguishes compositions which include both a silane coupling agent and a tris(silylorgano)amine from compositions which contain only a silane coupling agent (see column 1 of the Bishop patent). Bishop discloses the inclusion of a glycidoxy group-containing and/or acryloxy-containing silane coupling agent only with respect to its combination with a tris(silylorgano)amine. There is no disclosure or suggestion in Bishop that a glycidoxy group-containing or acryloxy group-containing composition is equivalent to any other silane coupling agent-containing composition in the absence of a tris(silylorgano)amine.

The Office's assertion that Bishop generically discloses that the adhesion promoter (i.e., glycidyloxy-functionalized silane or methacryloyloxy-functionalized silane) of the present claims is generically equivalent to the adhesion promoter of Penth is not supported by the evidence of record.

On the one hand, the Office asserts that "Bishop is not relied on for the particular use of the silane coupling agents". In this sense the Office considers Bishop narrowly, e.g., to focus only on disclosure that allegedly supports an assertion that certain silane coupling agents are equivalent. On the other hand, the Office applies this teaching broadly by ignoring

the narrow disclosure of Bishop which describes the use of particular silane coupling agents only insofar as they are combined with a tris(silylorgano) amine.

The Office cannot have it both ways. The Office is obligated to consider the Bishop reference as a whole. When considered as a whole, the Office must take into consideration Bishop's "teaching away" from compositions that are free of a tris(silylorgano)amine. The Office cannot consider Bishop only narrowly but must also take into consideration disclosure that glycidoxo group-containing and acryloxy group-containing silane coupling agents are specific only to tris(silylorgano)amine compositions. Either way, the rejection should not stand.

Applicants thus submit that the rejection of Claim 53 should be withdrawn.

Each of the presently pending independent claims is drawn to a membrane that includes a nonwoven polymeric fiber substrate having a porosity of "more than 50%". Applicants submitted factual evidence with the January 21, 2010 Amendment demonstrating that the mesh material exemplified in the Penth patent has a porosity of about 0.3%, i.e., a mere fraction of the minimum 50% porosity recited in the present claims.

The Office responded to Applicants' factual evidence and arguments in the paragraph bridging pages 14 and 15 of the April 16 Office Action. The Office took the position that pore size and porosity are related to fiber size. As a first point, Applicants point out that there is no evidence of record supporting the Office's assertion. Applicants traverse the Office's assertions to the extent the Office wishes to take official notice of this unsubstantiated statement.

The Office further asserts that it would have been obvious to modify the Penth material such that porosity was increased to at least 50%. Applicants point out that such a change in the porosity of the Penth material would require increasing the porosity of the Penth material by a factor of more than 100. Clearly, such a change is not routine

experimentation or optimization. Penth's only disclosure relevant to porosity is in no way suggestive of a porosity of more than 50% as presently claimed. The description of porosity in the present claims in combination with the other recited features describes an invention that is not obvious over the art of record.

Applicants request withdrawal of the rejection.

Obviousness-Type Double Patenting

With respect to the rejections for obviousness-type double patenting, Applicants request the Office withdraw such rejections for the reasons stated above with respect to the combination of the Bishop and Penth references. Each of the obviousness-type double patenting rejections relies on both Penth and Bishop as support. Upon the Office's determination that modification of Penth according to Bishop is unsupportable, and the 35 U.S.C. § 103 rejection is withdrawn, Applicants submit that it is appropriate for the Office to withdraw the obviousness-type double patenting rejections from the present application and raise such objections in the co-pending applications.

For the reasons discussed above, Applicants request withdrawal of the rejections and the allowance of all now-pending claims.

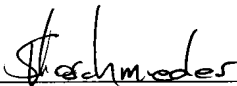
Respectfully submitted,

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